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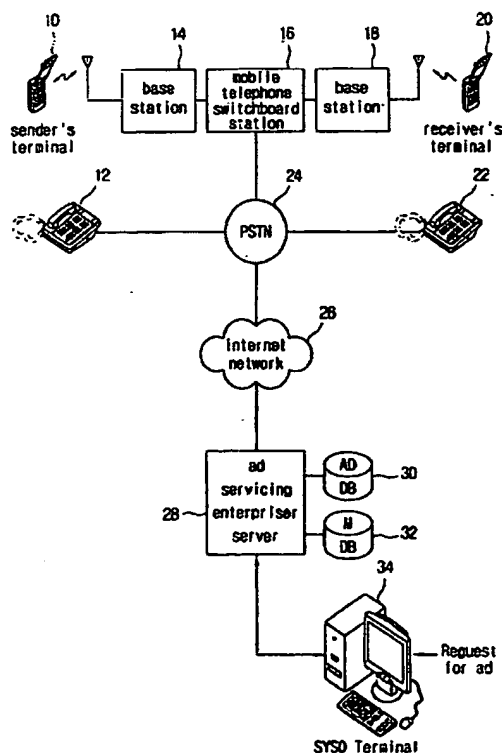
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(54) Title: METHOD AND APPARATUS FOR PROVIDING ADVERTISEMENT DURING CALL WAIT IN TELEPHONE NETWORK SYSTEM AND TELEPHONE INSTRUMENT



(57) Abstract: The present invention relates to a method and apparatus for servicing advertisement during call wait and a communication terminal. Particularly the method according to the invention comprises the steps of calling a receiver's terminal by a sender's terminal, outputting advertisement information instead of a call wait sound by the sender's terminal during the waiting for call response at the receiver's terminal, and ceasing the output of the advertisement information and maintaining conversation state by the sender's terminal at the time of call response from the receiver's terminal. Accordingly, the present invention can maximise the advertisement effect through communication terminals by issuing advertisement message instead of conventional standby signal sound during the call response wait.

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METHOD AND APPARATUS FOR PROVIDING ADVERTISEMENT  
DURING CALL WAIT IN TELEPHONE NETWORK SYSTEM AND  
TELEPHONE INSTRUMENT

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Technical Field

The present invention relates to a method and apparatus for providing advertisement during phone-call wait and more particularly to a method and apparatus by which maximization of the advertizing effect through the use of telephone communication terminals can be achieved by issuing advertisement sound message during the wait for call response from the receiver's terminal after calling a receiver's terminal by a sender's terminal.

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Background Art

Generally, the purpose of advisement may lie in maximizing synergic effect. A effective advertisement strategy may be in giving to consumers as much information as possible in an impressive way in a short time, because the advertisement period is limited. In other words, the advertisement effect can vary dependent on the manner or system for embodying advertisement service, even though the contents are similar.

Accordingly, advertisement solution enterprises are developing the advertisement in the form of various multimedia, so that the

advertisement can give consumers as strong impression as possible through visual image media and acoustic voice media.

However, most forms of recent advertisements are conducted in unit of a single medium such as TV, PC, internet, wire or wireless communication terminal or the like. Nevertheless, there was a difficulty in overcoming the limitedness and locality for providing simultaneous and composite solutions of networking among such respective media including combined advertisement of TV with internet, combined advertisement of wire/wireless communication terminal with internet and the like.

Specially, advertisement service techniques using telephones are presented. The advertisement service using telephones for example is a type of service in which the auditory advertisement is provided for a finite time before or after the use of telephone and instead the user having listened to the advertisement is exempted from the telephone charge for a certain period. In fact, the advertising effect of such a conventional service does not come up to the expectation, because the advertising method failed to be active due to the tediousness that users have to listen to advertisement before or after a phone conversation.

#### Disclosure of Invention

The object of the present invention is to provide a method and

apparatus for providing advertisement during phone-call wait by which maximization of the advertizing effect through telephone can be achieved by outputting advertisement sound message instead of call wait sound at  
5 telephone communication terminal during call response wait.

Another object of the invention is to provide a communication terminal capable of outputting advertisement sound during a call response wait.

The above object is achieved according to an aspect of the  
10 invention by a method for providing advertisement service during call wait in communicating terminal, comprising the steps of, calling a receiver's terminal by a sender's terminal, outputting advertisement information in stead of a call wait sound by the sender's terminal during the waiting for call response at the receiver's terminal, and ceasing the output of the  
15 advertisement information and maintaining conversation state by the sender's terminal at the time of call response from the receiver's terminal.

Preferably, the advertisement information is downloaded from an advertisement servicing enterpriser server to the advertisement storage means of respective terminals. The advertisement information may  
20 comprise a plurality of cells. The cells my be composed based on time unit or content unit.

Preferably, the sender's terminal, in the case the output of advertisement information is interrupted by the call response by the

receiver, stores the cell No. at the moment of interruption, and outputs the advisement information in continuation, starting with the interrupted cell during the next call wait.

- 5           The advertisement information may be output at the moment of receiving a ring-back tone signal, or at the moment of receiving a monitor tone signal or under a special condition, namely, of call wait.

          According to another aspect of the invention, the output of the advertisement information may be performed for a finite time before  
10   transmitting receiver's phone No. at the sender's terminal at the time of calling a receiver's terminal and is performed in continuation following the transmission of receiver's phone No. until the time of call response by the receiver's terminal.

          When the advertisement sound is interrupted during the call wait, the  
15   remaining part preferably is output after the completion of phone conversation. Otherwise, the remaining part may be displayed in character message. The character message may be provided from the advertisement enterpriser server pursuant to the known SMS transmission protocol.

- 20           At the sender's terminal, the transmission of all cells of advertisement information may be counted as one listening to the advertisement information.

          The advertisement sound output at the terminal can originate from

various voices. For example, the sound may comprise the group of the voices of a radio performer, male or female, a hero or heroine of a cartoon and the like to choose from. Preferably, advertisement information is  
5 provided in real time by the advertisement servicing enterpriser server. It is also provided that the advertisement servicing enterpriser server, in the case the output of advertisement information may be interrupted by the call response by the receiver, stores the No. of the sender's terminal and the cell No. at the moment of interruption, and outputs the advisement  
10 information in continuation, starting with the interrupted cell during the next call wait. The advertisement information is provided in real time from the advertisement servicing enterpriser server to the sender's terminal at the time of calling a receiver's terminal, and transmitting call for receiver to the receiver switchboard station after a finite time, is provided  
15 continuously in real time until the time of call response by the receiver's terminal. Similarly as in the previous aspect, at the advertisement servicing enterpriser server, the transmission of all cells of advertisement information is counted as one listening to the advertisement information.

The above object of the invention is also achieved by an  
20 apparatus for servicing advertisement during the call wait, comprising, an advertisement data base for storing advertisement information, a membership data base for storing the information of subscribed members, said members having requested advertisement service during call

- response wait, and a control section for providing advertisement information in real time during the wait for call response from receiver's terminal through the connected communication channel, when the receiver's terminal is called by the sender's terminal of a subscribed member, and for ceasing the output of the advertisement information at the time of a call response by the receiver's terminal to thereby preserve the conversation state, the control section being connected to a communication network.
- 10 The object as described above is also achieved according to still other aspect of the invention by a communication terminal capable of providing advertisement service during a call wait, which comprises a storage section for storing advertisement information downloaded from the advertisement servicing enterpriser server, an input section for inputting
- 15 telephone Nos. and command keys, a conversation section for processing the transmitted and received conversation voice, a transceiver for transmitting and receiving signals connected to a communication network, and a controlsection for outputting receivers' telephone Nos. input through said input section to said communication network through said transceiver,
- 20 for reading out an advertisement information from the storage section during the waiting for call response from receiver's terminal, to output the advertisement information in stead of call wait sound through said conversation section and for ceasing the output of the advertisement



information at the time of a call response by the receiver's terminal to preserve the conversation state.

5 Brief Description of Drawings

Figure 1 shows the schematic arrangement of a system for providing advertisement during a phone-call wait according to the invention,

Figure 2 shows the constitution of the advertisement data base of  
10 the advertisement servicing enterpriser server as shown in Figure 1,

Figure 3 shows the constitution of the membership data base of the advertisement servicing enterpriser server as shown in Figure 1,

Figure 4 shows the constitution of the downloaded advertisement list as shown in Figure 3,

15 Figure 5 shows the constitution of a communication terminal according to the invention,

Figure 6 shows the constitution of the advertisement information stored in the storage section as shown in Figure 5,

Figure 7 shows the flow chart for explaining the operation of the  
20 advertisement servicing enterpriser server according to the invention,

Figure 8 shows the flow chart for explaining the operation of the communication terminal according to the invention,

Figure 9 shows the screen of a home page of the advertisement

servicing enterpriser server according to the invention,

Figure 10 shows the screen of an advertisement channel of the advertisement servicing enterpriser server according to the invention, and

5        Figure 11 shows the view for explaining the signal processing of the advertisement servicing enterpriser server and intelligence network according to a preferred variant of the invention.

#### Best Mode for Carrying Out the Invention

10        Preferred embodiments of the present invention will be described in detail below by referring to accompanying drawings.

Figure 1 shows the schematic arrangement of a system for providing advertising service during call wait according to the invention.

In Figure 1, the sender terminal includes a mobile wireless  
15        terminal 10 and a wire telephone 12. The mobile wireless terminal 10 includes a cellular phone, PCS phone, IMT-2000 phone and satellite terminal. The mobile wireless terminal 10 is connected to a mobile telephone switchboard station 16 via a base station 14. The receiver terminal includes a mobile wireless terminal 20 and a wire telephone 22.  
20        Similarly, the mobile wireless terminal 20 is connected to a mobile telephone switchboard station 16 via a base station 18. The wire telephones 12 and 13 are connected to the PSTN 24. The ad servicing enterpriser server 28 is connected to the PSTN 24 through the internet

network 26. The ad service enterpriser server 28 includes an ad data base 30 and membership data base 32 as well as a system operator terminal 34.

5           Figure 2 shows the constitution of the ad data base 30 of the ad servicing enterpriser server in Figure 1. The ad data base 30 has the fields of e.g. ad channels, advertisers, introduction of the advertisers, ad information, number of downloadings, number of listenings, ad time, registration No. and the like. The ad channels can be set in various ways  
10   dependent on the classifying manner for the categories of advertisers and advertising contents and the like. The ad information in this invention includes a plurality of cells divided according to the ad substance, ad time or the like. The number of downloadings represents the number of the downloadings of the corresponding advertise conducted by subscribed  
15   members and the number of listenings represents the listened number of the downloaded ad information by actual users. And the ad time represents the total duration of an ad information, for example, 5, 7, 10, 15 or 20 seconds.

          Figure 3 shows the constitution of the membership data base 32  
20   of a ad servicing enterpriser server in Figure 1. The membership data base 32 has fields of the member ID, password, name, telephone No., address, number of downloadings, number of listenings, downloaded ads list, ad bonus points and the like. The number of downloadings is the total

downloadings by subscriber members and the number of listenings means the total listenings made by subscriber members through telephoning.

- 5 The downloaded ad list has, as seen in Figure 4, the fields of the ad registration No., ad channels, advertisers, ad information, ad time, downloaded dates, number of downloadings, deletion date and the like.

The ad information downloaded by subscribed members is controlled in terms of the downloaded dates, deletion date and number of listenings.

- 10 Figure 5 shows the arrangement of a mobile wireless terminal according to the invention. A mobile wireless terminal comprises an antenna 40, duplex 42, receiving section 44, decoder 46, sending section 48, encoder 50, frequency synthesizer 52, audio circuit section 54, speaker 56, mike 58, display section 60, input section 62, storage section  
15 64 and control section 66.

The control section 64 includes a ROM, RAM, flash memory and the like, wherein the flash memory stores the ad information downloaded from the ad servicing enterpriser server 28.

- The input section 62 includes ten key, function keys and the like to  
20 input phone Nos. and command keys. The display section 60 generally comprises a liquid crystal to display characters and numerics. It displays the accessed home pages or the like, when connected to the internet.

The audio circuit section 54 as the voice transmitter-receiver is

connected to a speaker 56 and mike 58, so that voice may be input through the mike 58 and the received voice may be output through the speaker 56.

5       The receiving section 44 together with the decoder 46, the sending section 48 together with the encoder 50 and the frequency synthesizer 52 make up transceiver, wherein the signal received through antenna is demodulated at the receiving section 44 and the demodulated signal is decoded at the decoder 46 to output voice data. Further, the  
10 voice data to be transmitted is encoded at the encoder 50 and the encoded signal is modulated through the sending section 48 to be sent out to the air through the antenna 40.

      The control section 66 executes the OS program, the internet-connected web browse and the like. This control section 66 outputs the  
15 phone Nos. of the receivers, which were input through the input section 62, through the transceiver 44~52. In addition, the control section reads out an ad sound from the storage section 64, during the waiting of call response from the terminal of a receiver, so that the ad sound in stead of call waiting sound may be output through the voice transmitter-receiver 54,  
20 and the output of the ad sound is interrupted at the time of call response from the receiver's terminal to thereby maintain conversation state.

      The control section 66 can be operated, according to the option, so that the ad information remaining at the time of prior interruption may

be resumed to be output in the form of voice or character message after the end of phone conversation. Furthermore, When a detailed information of the advertisement is desired after the end of phone conversation, the  
5 detailed information is available via the internet or SMS transmission route. In this case, purchase through electronic commercial transaction by accessing the internet site of a corresponding advertiser through the internet or 080 service may be linked and application for communication purchase by accessing the shopping mall through the 080 service may be  
10 linked.

Figure 6 shows the constitution of an ad information stored in the storage section of Figure 5. Each ad information has the fields of the ad registration No., ad contents, downloaded dates, deletion date, number of listenings, ceased cell Nos. and the like.

15 Figure 7 shows the flow chart to explain the operation of the ad servicing enterpriser server according to the invention.

First, when the ad servicing enterpriser server is accessed through the internet network, the server 28 checks the log-in (100). When the log-in check results in "no", the screen for applying for membership is  
20 provided (102). When the information for joining the membership is input in the screen for new application, the information as input is registered in the membership data base 32 (104) and My advertisement is produced (106) before the step 100 is performed.

In case the log-in is checked at the step 100, the ad servicing home page as shown in Figure 9 is provided. When the ad search is clicked in the ad servicing home page (108), the ad channel list shown in Figure 9 is provided (110). When the desired ad channel is selected in the ad channel list (112), the ad channel list shown in Figure 10 is provided (114). The advertisement selected in the ad list provided (116), the detailed information for the selected advertisement is provided (118). When the user selects the download of the desired advertisement after reading the detailed information (120), the selected ad information is downloaded (122). Simultaneously with the downloading, the related matters in the ad data base and membership data base are renewed. In other words, the number of downloadings for the corresponding advertisement in the ad data base is increased by 1, and the downloaded ad is registered on the downloaded ad list in the membership data base and at the same time the downloaded date and the number of downloadings are renewed.

If the result of the ad search is "no" at the step 108, it is checked whether My ad is selected (124). If so, the My ad list is provided by referring to the membership data base (126). In the My ad list, the substance of the downloaded ad list is presented.

If the My ad is not selected at the step 124, the ad count information is received (128). Dependent on the ad count information as received, the

related matters in the ad data base and membership data base are renewed in accordance with the information of the hearing number of the ad by the accessing subscriber.

5           Figure 8 is the flow chart for explaining the operation of a communication terminal according to the invention.

          In the mobile wireless terminal, the waiting state is checked (130), and whether the internet is connected is asked at the waiting state (132). If so, the web browse is driven to gain access to the ad servicing  
10   enterpriser site (134).

          When the ad servicing enterpriser site is connected, the number of listenings to the advertisement meanwhile and the information of using the ad are transmitted to the server 28 (136). Subsequently, an ad is selected through the home page screen of the server 28 and then the new  
15   ad information provided by the server 28 is downloaded (138). The downloaded ad information in the form as shown in Figure 6 is stored in the storage section (140). When the internet connection is ended, waiting state is maintained.

          At the step 132, when the internet connection is not made, the  
20   input of the receiver's phone No. is temporarily stored in the storage section (142) and whether the SEND key is input is asked (144). In case the SEND key has been input, simultaneously with the start of counting the time of a fixed period, for example 10 seconds, by using a timer, the



ad substance is read out from the storage section to start ad broadcasting (146). At the step 146, if there is an ad cell No. interrupted at the time of prior call waiting, the information of the interrupted cell No. is first read out  
5 and the rest part of the interrupted ad is broadcasted.

During the broadcasting, it is checked whether the time period designated by the timer is lapsed (148), and when the designated time has been lapsed, the temporarily stored information including the receiver's phone No. is sent out to call the terminal of the receiver (150).

10 When the base station 14 controlling senders' terminals receives the call signal, it sends out monitor tone signal at 6 kHz. The terminal of the sender, which examines the presence of monitor tone signals (152), transmits the monitor tone signal back to the base station when the monitor tone signal is received.

15 When the base station 14 receives the monitor tone signal transmitted back, the station allocates a conversation channel for the sender's terminal and requests the mobile telephone switchboard station 16 to call the receiver's terminal. When the mobile telephone switchboard station 16 commands the base station 18 in charge of controlling  
20 terminals of receivers to call the terminal of the receiver, the base station 18, upon receiving the call signal, calls the receiver's terminal. The base station which allocated the conversation channel with the receiver's terminal sends out monitor tone. The base station 18, upon receiving the

reversely transmitted monitor tone from the receiver's terminal following the receipt of monitor tone, commands the generation of call sound to the receiver's terminal. When the receiver's terminal receives the command of  
5 generating call sound, it generates call sound, sending out a signal tone at 10 kHz. When the user of the receiver's terminal responds to the sound, the generation of the signal tone is stopped. Hereupon, the base station 18 informs the mobile telephone switchboard station 16 of the call response by the receiver's terminal. Then, conversation is established,  
10 with the conversation channel connected at the mobile telephone switchboard station 16.

In case response from the receiver is present at the sender's terminal (156), the commercial broadcasting is ceased, the cell No. at the instant of cease is stored and then a signal sound or melody signifying the  
15 presence of the receiver's response is sent out (158). Subsequently, conversation begins through the conversation channel connected between the sender and receiver(160).

If there is no response from the receiver at the step 156, it is examined whether the phone is busy at the step 162. If busy, the ad  
20 broadcasting is ceased, the cell No. at the instant of cease is stored (164) and then the busy state is announced (166).

In the case that there is no response of the receiver, it is not busy state and the receiver's response is absent (168), with the lapse of a

certain time, the ad broadcast is ceased and the cell No. at the instant of  
cease is stored (170) and then the responseless state is announced  
(172).

5           In the embodiment as described above, the ad servicing period  
during call wait may be extended by the same period as the delay time by  
delaying the transmission of the call signal by the mobile telephone  
terminal itself. Accordingly, a very effective advertisement time can be  
set.

10           Alternatively, the time point for outputting the ad broadcasting can  
be determined without a delay time. As described above, the time point  
for outputting the ad broadcasting at the sender's terminal may be  
controlled in response to the transmission of the signal sound by the  
receiver's terminal, namely in response to ring-back tone signal or monitor  
15   tone signal.

          Alternatively, the ad broadcasting can be so arranged as to  
automatically start one second, for example, after the transmission button  
is input at the sender's terminal.

          The commercial broadcast in response to signal sound or ring-  
20   back tone signal may be output during the time period from the moment  
when a call sound begins to be generated to the moment the receiver  
answers the phone. Therefore, the average ad time corresponding to the  
call wait time may tend to be very short, because the ring-back tone

response mode depends on the receiver's reacting time to phone call.

On the other hand, in the case of the monitor tone response mode, relatively long call wait time, namely long ad broadcasting time, compared  
5 with the ring-back mode described above, can be secured, because the ad broadcast is output right at the moment of normal connection between the base station and the terminal, regardless of connection with the receiver.

While the transmission of the number of listenings and the ad user  
10 information at the time of connecting to the internet was described in the previous embodiment, the same transmission may be possible before or after the connection of mutual conversation based on the exchange of protocols with the base station.

In the case of terminals without the function of internet connection, the ad  
15 information can be transmitted during the call wait from the communication enterpriser side through the conventional character message transmission protocol (SMS function). In such a mode, the ad information in the form of character message may be displayed on the display window of a receiver's terminal or the character message can be  
20 converted into a sound signal to be output as a voice by incorporating a sound synthesizing chip in the terminal.

Figure 11 shows a view for explaining the signal processing of the ad servicing enterpriser server and intelligence network according to an

embodiment of the invention.

The intelligence network includes a service control point (SCP) 70, service data point (SDP) 72, customer profile management (CPM) 74, intelligent peripheral (IP) 76, service switching point (SSP) 78, sending network access point (NAP) 80 and receiving network access point (NAP) 82.

A phone call is made through a wire telephone 12, trying to converse. The service switching point 78 is connected to the telephone terminal of a customer trying to converse through the sending network access point 80. The SSP 78 examines whether the caller is the ad service subscriber or the valid customer by making reference to the customer profile management 74 via the SCP 70 and SDP 72.

On confirmation of a customer, the SCP 70 asks the IP 76 to make preparation for commercial broadcasting service and collects the customer profile information. When the IP 76 issues the signal of completed preparation, the SCP 70 commands the server 28 through the IP 76 to start the advertisement.

Then, the server 28 transmits the ad information to the SSP 78 through the IP 76. The transmitted ad is supplied in real time to the terminal of the sender through the sending network access point 80. At this time, the SCP counts a predetermined period, 10 seconds for example, and commands the SSP 78 to issue a call signal, when 10

seconds have elapsed. The SSP 78 transmits the call signal to the terminal of the receiver through the receiving network access point 82 and detects the receiver's response. The SSP 78 reports so to the SCP 70, 5 when the receiver's response is detected. The SCP 70, upon receipt of the report of receiver's response, commands the IP 76 to stop the commercial broadcast and collects the ad broadcast information such as the cell No. of interrupted ad, the ad duration and the like to register them on the CPM 74 through the SDP 72.

10 As described above, a more effective ad broadcast can be performed by delaying the call response wait time by a fixed time through setting of the advertising time at the server by means of the intelligence network system of communication network.

While in the above embodiments, only the ad sound was 15 mentioned, simultaneous provision of ad character message or ad image is possible. As image transmission is possible with video phones in the communication services such as IMT-2000, on terminal screens, ad images can be displayed together with the ad sound during call response waiting time, wherein during conversation period the ad sound is ceased 20 but the ad contents provided as images are not interrupted, for example, continuously displayed in the form of reduced-size, overlapped or passing image on the main screen, occasionally converted into graphic mode or in other forms.

As seen in the above description, maximization of advertising effect based on telephone can be realized according to the invention by providing advertisement in stead of conventional call sound during the  
5 waiting time for call response.

Further, the number of listenings to advertisements may be counted as cumulative beneficial points according to the invention, so that the points may be worth cyber money, telephone charges, cash, remittance to bank accounts, commodity purchasing money in electronic  
10 commercial transactions or the like.

It is to be understood that, while the invention was described mainly with respect to specific embodiments, the invention is never restricted to those embodiments and a variety of modifications and alterations would be possible to a man skilled in the art by referring to the  
15 description or drawings presented here and within the spirit of the invention and thus those modifications or alterations are to fall within the scope of the invention, which scope should be limited only by the attached claim.

**WHAT IS CLAIMED IS:**

1. A method for providing advertisement service during call wait in communicating terminal, comprising the steps of:

- 5        calling a receiver's terminal by a sender's terminal;
- outputting advertisement information in stead of a call wait sound by the sender's terminal during the waiting for call response at the receiver's terminal; and
- ceasing the output of the advertisement information and
- 10       maintaining conversation state by the sender's terminal at the time of call response from the receiver's terminal.

2. The method according to Claim 1, wherein said advertisement information is downloaded from an advertisement servicing enterpriser server to the advertisement storage means of respective terminals.

- 15       3. The method according to Claim 1, wherein said advertisement information comprises a plurality of cells.

4. The method according to Claim 3, wherein said cells are composed based on time unit or content unit.

5. The method according to Claim 3, wherein said sender's
- 20       terminal, in the case the output of advertisement information is interrupted by the call response by the receiver, stores the cell number at the moment of interruption, and outputs the advisement information in continuation, starting with the interrupted cell during the next call wait.



6. The method according to Claim 3, wherein said sender's terminal, in the case the output of advertisement information is interrupted by the call response by the receiver, stores the cell number at the moment  
5 of interruption, and outputs the rest advisement information after the end of the conversation.

7. The method according to Claim 3, wherein said sender's terminal, in the case the output of advertisement information is interrupted by the call response by the receiver, stores the cell number at the moment  
10 of interruption, and the rest advisement information is displayed as character message in a display window.

8. The method according to Claim 1, wherein the time point of outputting the advertisement information is the moment of receiving a ring-back tone signal.

15 9. The method according to Claim 1, wherein the time point of outputting the advertisement information is the moment of receiving a monitor tone signal.

10. The method according to Claim 1, wherein the output of the advertisement information is performed self-acting at the terminal itself  
20 after one second following the input of transmission key.

11. The method according to Claim 1, wherein the output of the advertisement information is performed for a finite time before transmitting receiver's phone number at the sender's

terminal at the time of calling a receiver's terminal and is performed in continuation following the transmission of receiver's phone number until the time of call response by the receiver's terminal.

12. The method according to Claim 4, wherein at the sender's terminal, the transmission of all cells of advertisement information is counted as one listening to the advertisement information.

13. The method according to Claim 1, wherein said advertisement information is provided in real time by the advertisement servicing enterpriser server.

14. The method according to Claim 13, wherein said advertisement servicing enterpriser server, in the case the output of advertisement information is interrupted by the call response by the receiver, stores the number of the sender's terminal and the cell number at the moment of interruption, and outputs the advertisement information in continuation, starting with the interrupted cell during the next call wait.

15. The method according to Claim 13, wherein the advertisement information is provided in real time from the advertisement servicing enterpriser server to the sender's terminal at the time of calling a receiver's terminal, and transmitting call for receiver to the receiver switchboard station after a finite time, is provided continuously in real time until the time of call response by the receiver's terminal.

16. The method according to Claim 13, wherein at the advertisement servicing enterpriser server, the transmission of all cells of advertisement information is counted as one listening to the advertisement information.

17. A communication terminal capable of providing advertisement service during a call wait, comprising:

a storage section for storing advertisement information downloaded from the advertisement servicing enterpriser server;

an input section for inputting telephone numbers and command keys;

a conversation section for processing the transmitted and received conversation voice;

a transceiver for transmitting and receiving signals connected to a communication network; and

a control section for outputting receivers' telephone numbers input through said input section to said communication network through said transceiver, for reading out an advertisement information from the storage section during the waiting for call response from receiver's terminal, to output the advertisement information in stead of call wait sound through said conversation section and for ceasing the output of the advertisement information at the time of a call response by the receiver's terminal to preserve the conversation state.

18. The communication terminal according to Claim 17, wherein the communication terminal comprises a video phone of IMT-2000, and even during the conversation state transited from advertisement state, in spite of the advertisement sound being ceased, the advertisement images  
5 are displayed still in the form of reduced-size, overlap, passage or the like on the main screen.

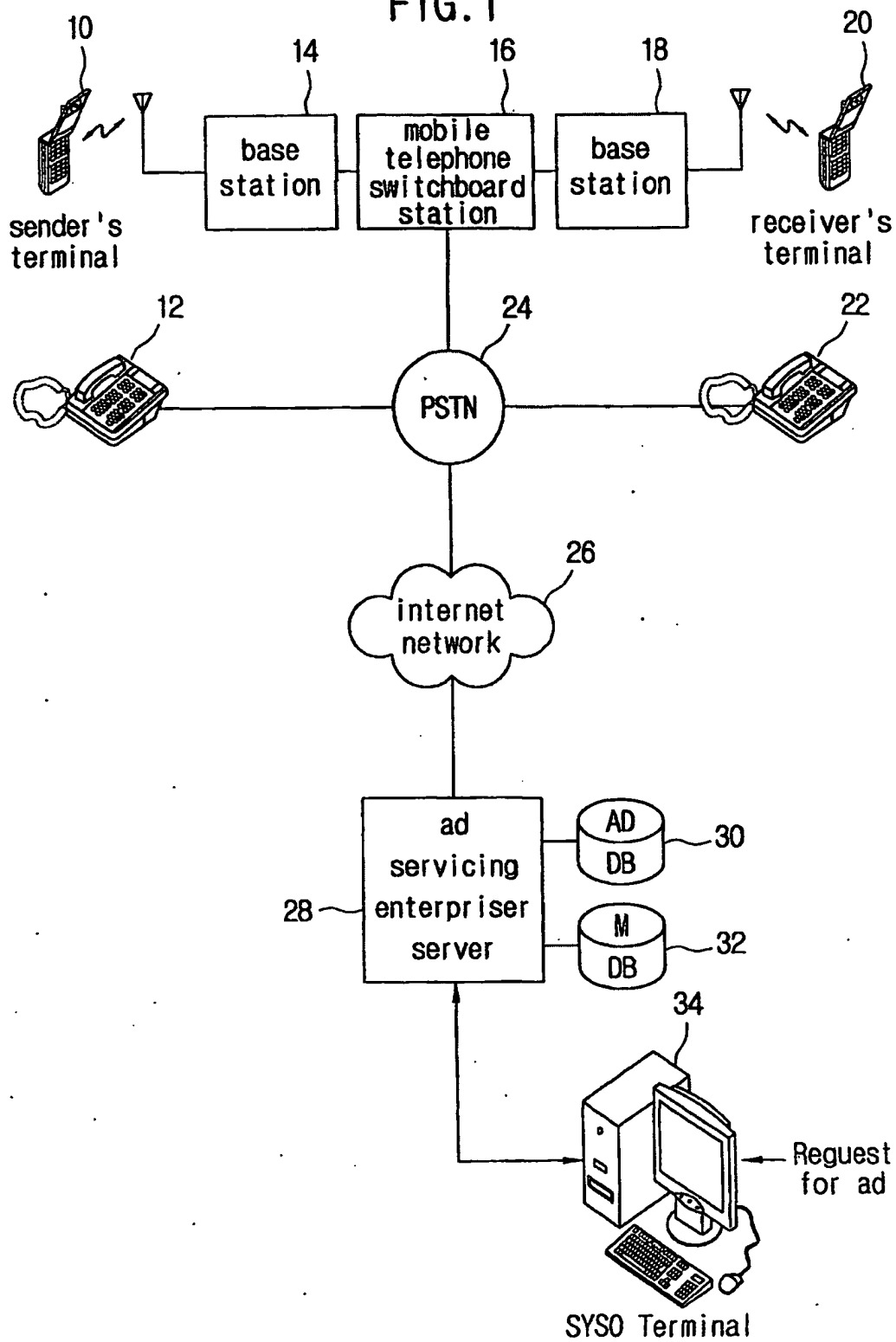
19. The communication terminal according to Claim 17, wherein the communication terminal, in response to the request of a user, is  
10 capable of receiving the details of an advertisement from the side of communication enterpriser through the transmission of SMS after the end of conversation.

20. The communication terminal according to Claim 17, wherein the communication terminal, in response to the request of a user, is capable of receiving the details of an advertisement by means of  
15 internet phone by accessing the internet after the end of conversation.

21. An apparatus for servicing advertisement during the call wait, comprising:  
an advertisement data base for storing advertisement information;  
20 a membership data base for storing the information of subscribed members, said members having requested advertisement service during call response wait; and  
a control section for providing advertisement information in real time

during the wait for call response from receiver's terminal through the connected communication channel, when the receiver's terminal is called by the sender's terminal of a subscribed member, and for ceasing the  
5 output of the advertisement information at the time of a call response by the receiver's terminal to thereby preserve the conversation state, the control section being connected to a communication network

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FIG. 1



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FIG.2

ad channel	
advertiser	
introduction of advertiser	
ad information	CELL 1
	CELL 2
	⋮
	CELL n
number of downloadings	
number of listenings	
ad term	
reg. No	

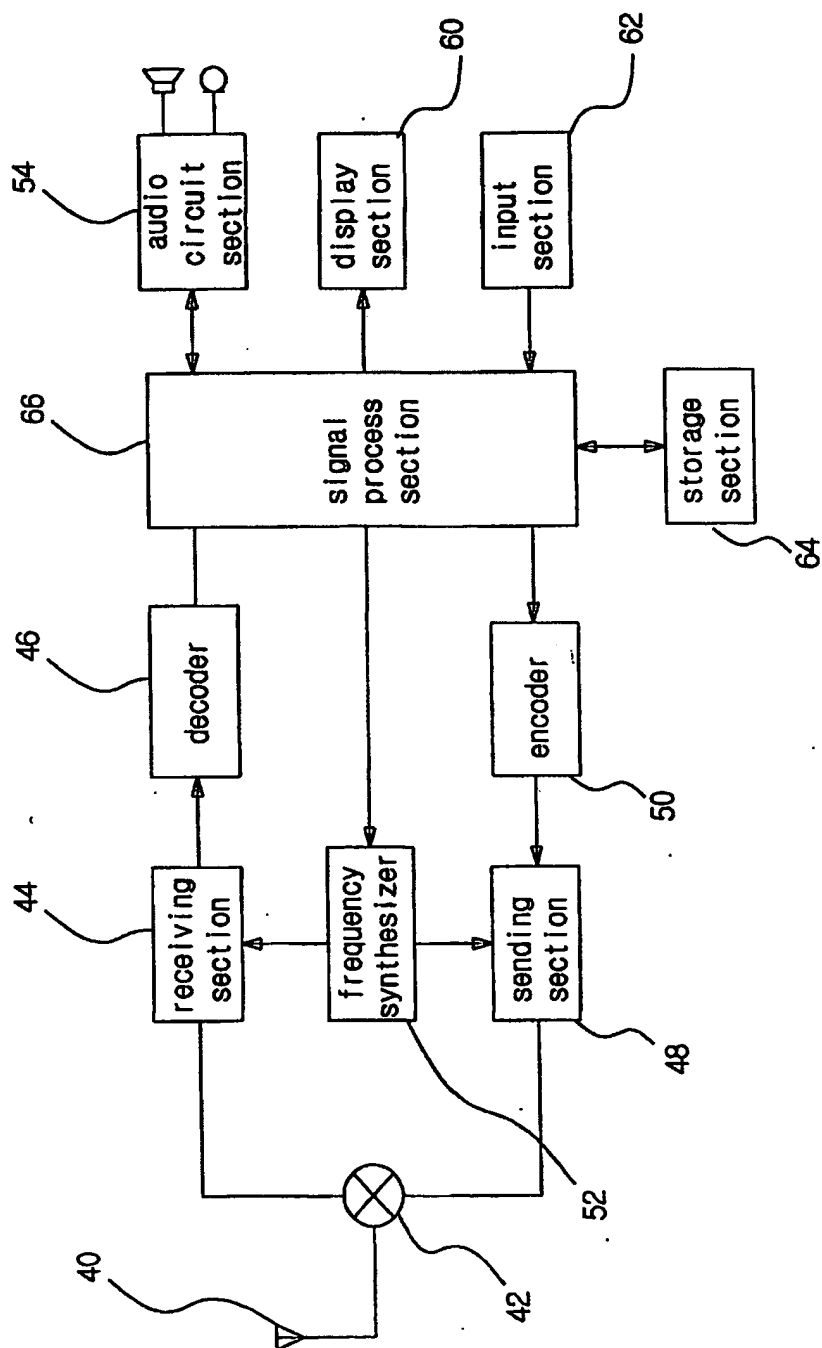
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FIG.3

member 's ID
password
name
tel. No
address
number of downloadings
number of listenings
downloaded ad list
ad bonus points



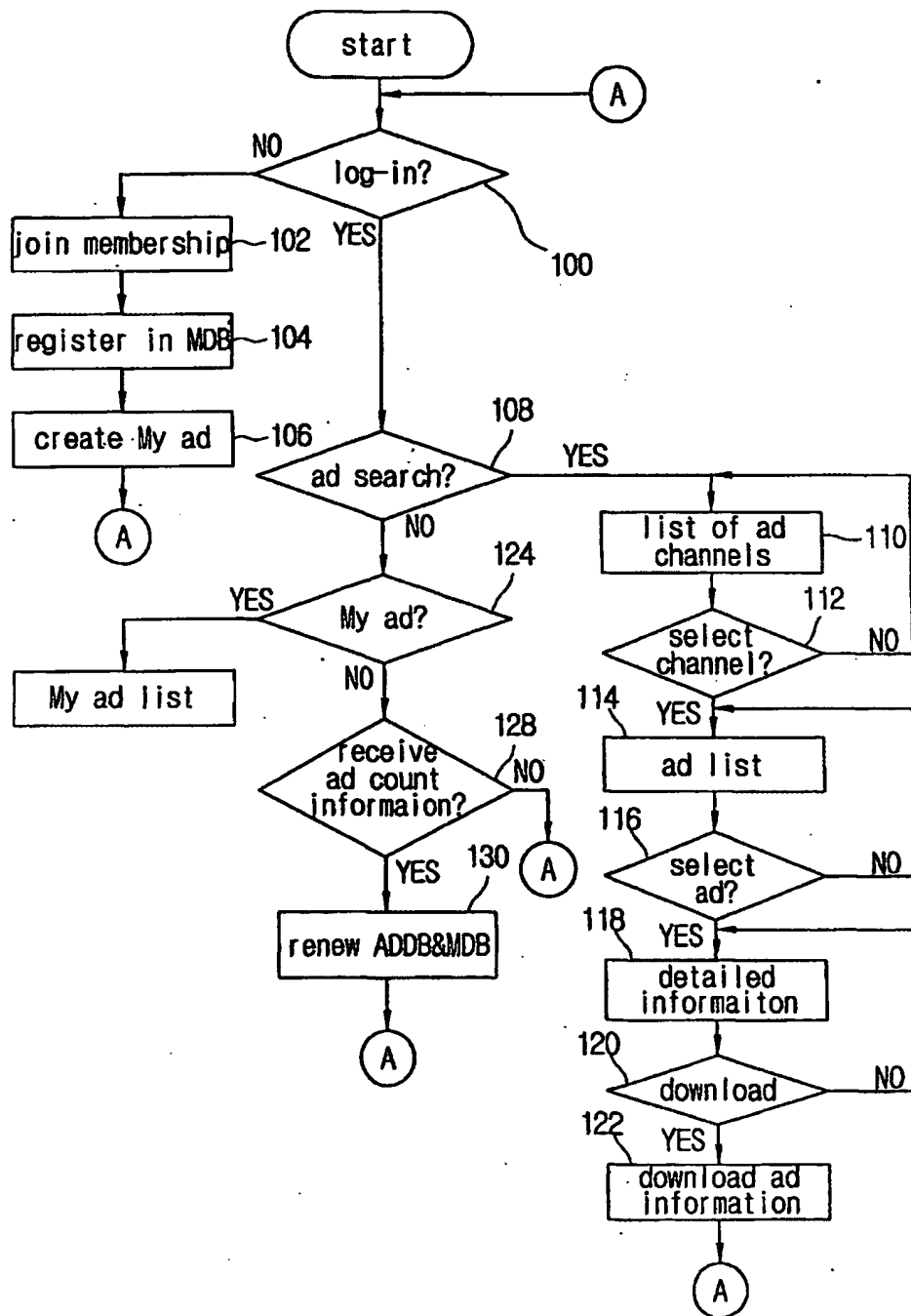
4/11  
FIG.4

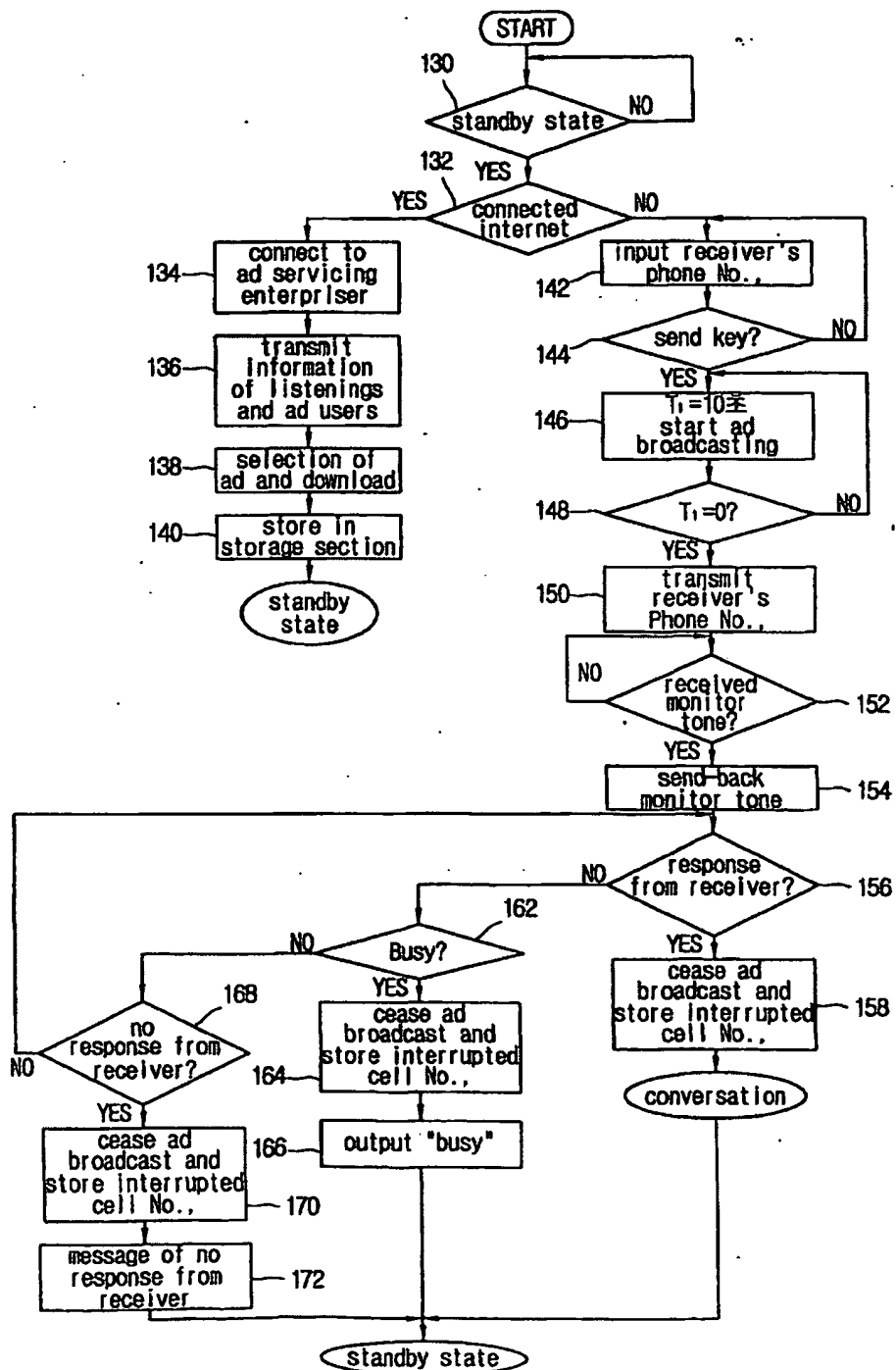
ad reg.No.
ad channels
advertiser
ad information
ad duration
ad downloaded date
number of listenings
deleted date



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FIG.6

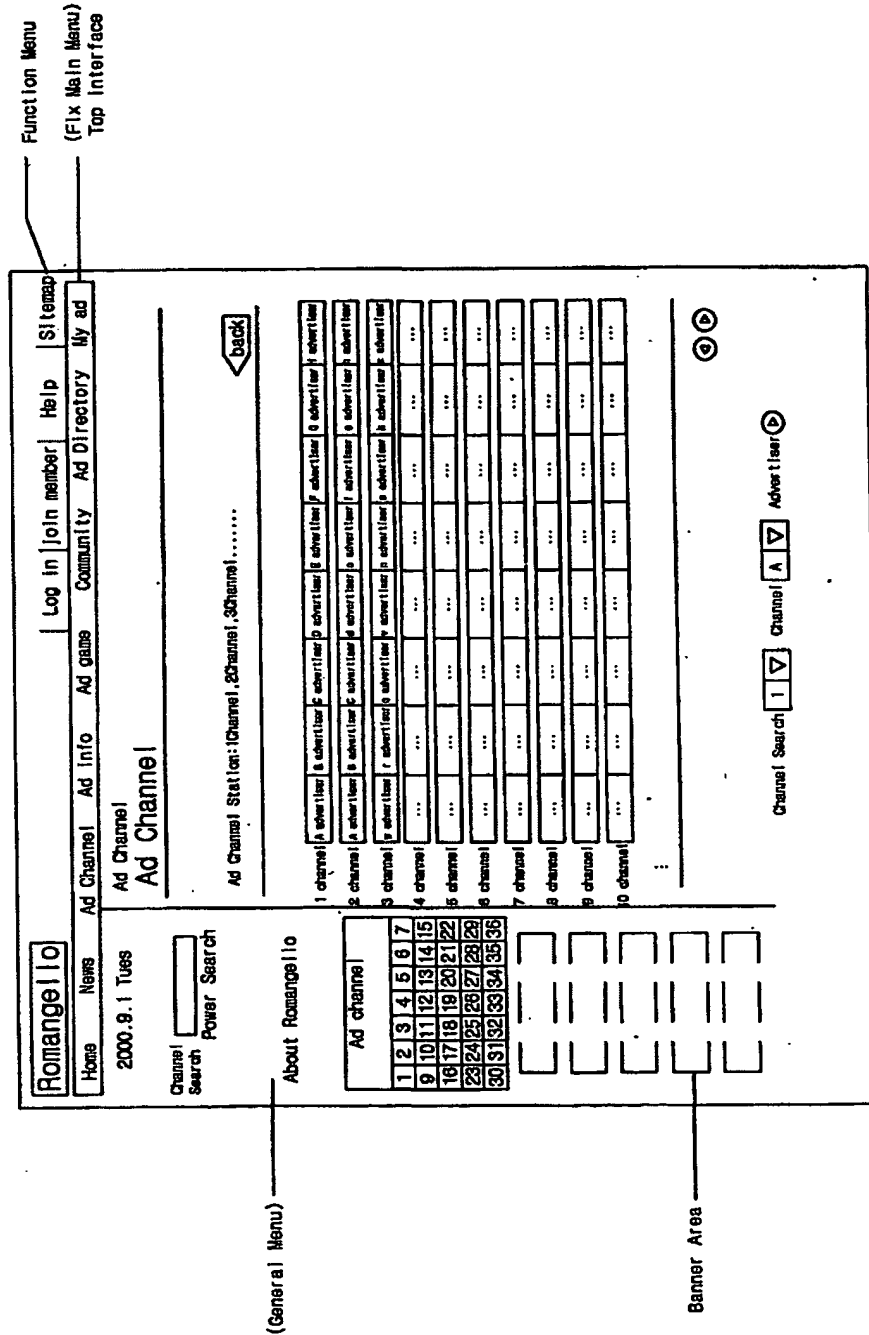
ad 1	ad reg.No				
	ad contents	cell1	cell2	...	celln
	downloaded date		deleted date		
	number of listenings		interrupted cell No		
ad 2	ad reg.No.				
	ad contents	cell1	cell2	...	celln
	downloaded date		deleted date		
	number of listenings		interrupted cell No.		
⋮	⋮				
ad n	ad reg.No.				
	ad contents	cell1	cell2	...	celln
	downloaded date		deleted date		
	number of listenings		interrupted cell No.		

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FIG.7

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FIG.8

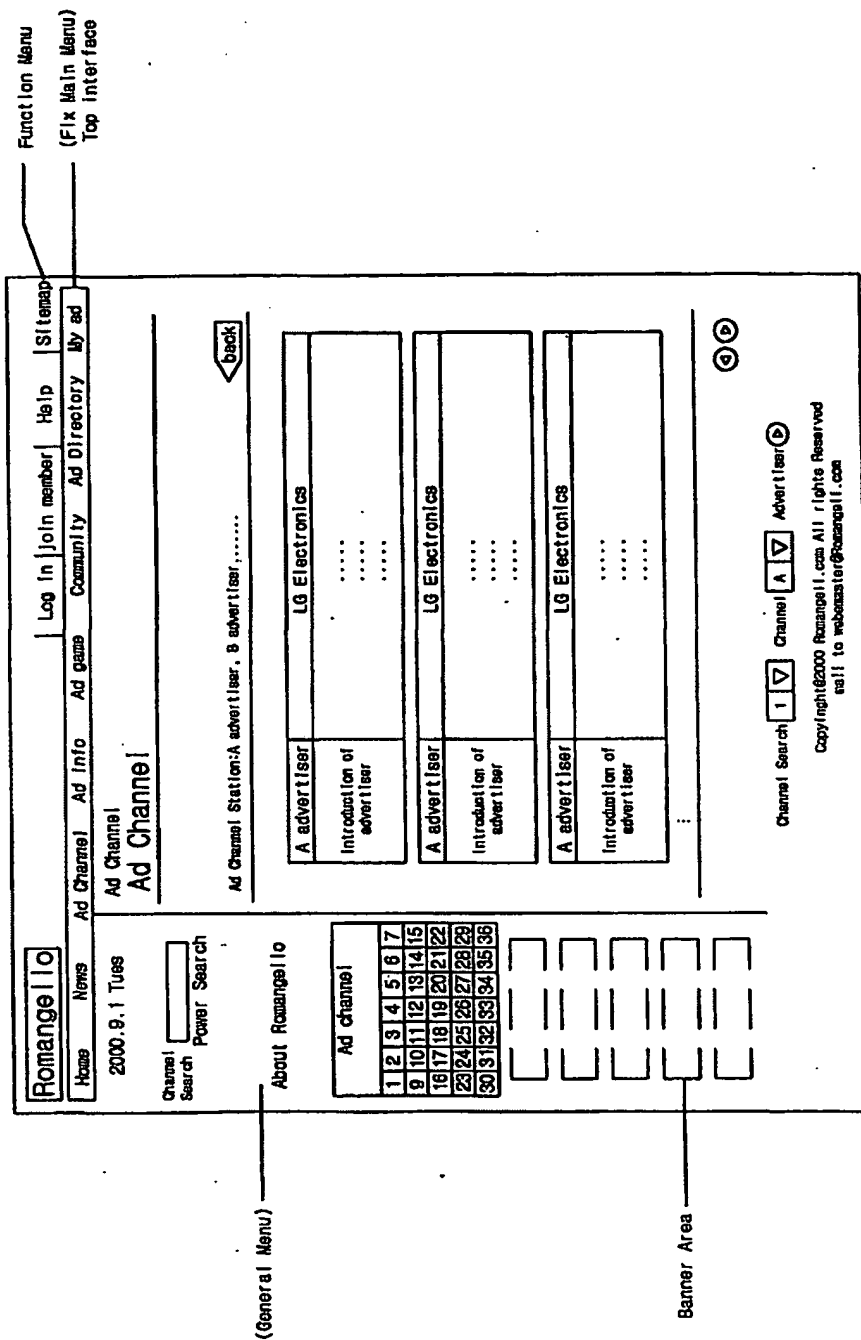
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FIG. 9



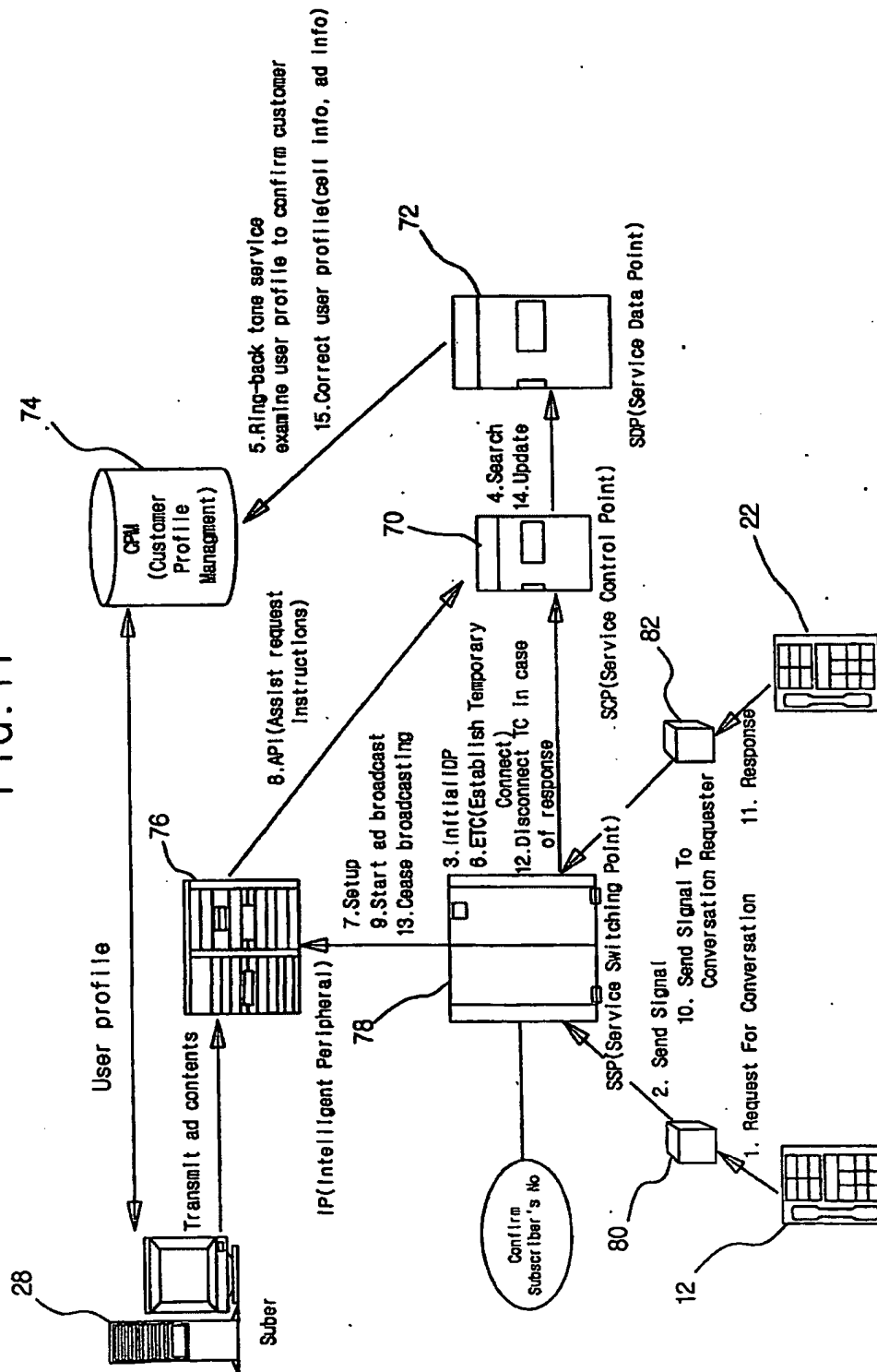
10/11

FIG. 10



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FIG. 11





## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR01/00513

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> <b>IPC7 H04M 11/00</b> According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) H04M 3/50, H04M 3/42, H04Q 7/38, G06F 3/14 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched H04M 3/42, H04M 3/50 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 830423 A ( ZEROSEI S R L. ) 14 AUGUST 1997 See the whole document	1, 17, 21
Y	KR 2000-0012224 ( LEE, HYOUNG CHAN ) 06 MARCH 2000 See the whole document	1, 17, 21
A	US 948161 ( Alcatel USA Sourcing L. P. ) 09 OCTOBER 1997 See the whole document	1
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
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**ADVERTISING METHOD BY USING RING-BACK TONE**

Abstract:

An advertising method by using a ring-back tone is provided. A controller employed in a sender-side switching system recognizes a sender's telephone number and a receiver's telephone number dialed at the sender's telephone set. Then the receiver's telephone number is transmitted to a receiver-side switching system at a calling stage. The receiver-side switching system checks the state of the receiver's telephone, e.g., ready or busy, and, subsequently, send, e.g., a ring-back tone in conformity to the state to the sender-side switching system. The sender-side switching system receives the ring-back tone. In case the ring-back tone is a busy tone, the sender-side switching system forwards t  
505

he busy tone to the sender's telephone set. Otherwise, that is, the ring-back tone is a ringing tone which implies that the receiver's telephone is ready to receive a call, the sender-side switching system searches registered member information by consulting a database linked to the controller and checks if the receiver's telephone number matches a registered member in the database. If the sender is determined not to be a registered member, the sender-side switching system forwards the ring-back tone; otherwise, it sends a predetermined advertisement message stored in an advertisement memory to the sender's telephone set. If a response, e.g., a hook-off, from the receiver's telephone is perceived or if the sender terminates the call, the sender-side switching system stops the sending of the advertisement message.

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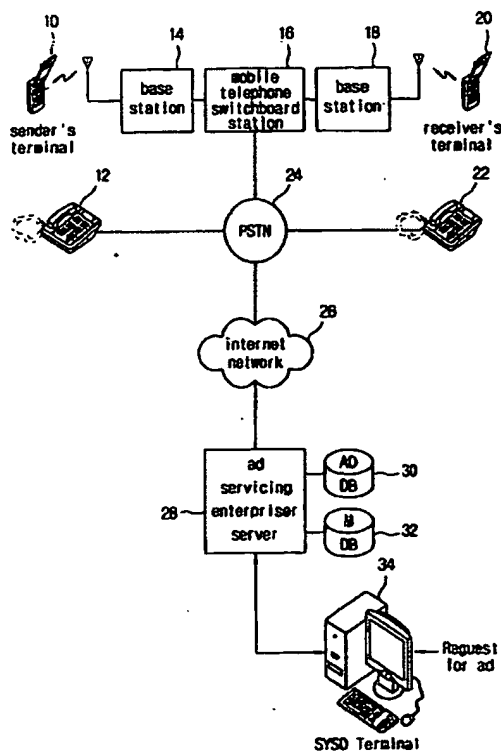
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(54) Title: METHOD AND APPARATUS FOR PROVIDING ADVERTISEMENT DURING CALL WAIT IN TELEPHONE NETWORK SYSTEM AND TELEPHONE INSTRUMENT



(57) Abstract: The present invention relates to a method and apparatus for servicing advertisement during call wait and a communication terminal. Particularly the method according to the invention comprises the steps of calling a receiver's terminal by a sender's terminal, outputting advertisement information instead of a call wait sound by the sender's terminal during the waiting for call response at the receiver's terminal, and ceasing the output of the advertisement information and maintaining conversation state by the sender's terminal at the time of call response from the receiver's terminal. Accordingly, the present invention can maximise the advertisement effect through communication terminals by issuing advertisement message instead of conventional standby signal sound during the call response wait.

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

METHOD AND APPARATUS FOR PROVIDING ADVERTISEMENT  
DURING CALL WAIT IN TELEPHONE NETWORK SYSTEM AND  
TELEPHONE INSTRUMENT

5

Technical Field

The present invention relates to a method and apparatus for providing advertisement during phone-call wait and more particularly to a method and apparatus by which maximization of the advertizing effect through the use of telephone communication terminals can be achieved by issuing advertisement sound message during the wait for call response from the receiver's terminal after calling a receiver's terminal by a sender's terminal.

15 

Background Art

Generally, the purpose of advisement may lie in maximizing synergic effect. A effective advertisement strategy may be in giving to consumers as much information as possible in an impressive way in a short time, because the advertisement period is limited. In other words, the advertisement effect can vary dependent on the manner or system for embodying advertisement service, even though the contents are similar.

Accordingly, advertisement solution enterprises are developing the advertisement in the form of various multimedia, so that the

advertisement can give consumers as strong impression as possible through visual image media and acoustic voice media.

However, most forms of recent advertisements are conducted in unit of a single medium such as TV, PC, internet, wire or wireless communication terminal or the like. Nevertheless, there was a difficulty in overcoming the limitedness and locality for providing simultaneous and composite solutions of networking among such respective media including combined advertisement of TV with internet, combined advertisement of wire/wireless communication terminal with internet and the like.

Specially, advertisement service techniques using telephones are presented. The advertisement service using telephones for example is a type of service in which the auditory advertisement is provided for a finite time before or after the use of telephone and instead the user having listened to the advertisement is exempted from the telephone charge for a certain period. In fact, the advertising effect of such a conventional service does not come up to the expectation, because the advertising method failed to be active due to the tediousness that users have to listen to advertisement before or after a phone conversation.

#### Disclosure of Invention

The object of the present invention is to provide a method and

apparatus for providing advertisement during phone-call wait by which maximization of the advertizing effect through telephone can be achieved by outputting advertisement sound message instead of call wait sound at  
5 telephone communication terminal during call response wait.

Another object of the invention is to provide a communication terminal capable of outputting advertisement sound during a call response wait.

The above object is achieved according to an aspect of the  
10 invention by a method for providing advertisement service during call wait in communicating terminal, comprising the steps of, calling a receiver's terminal by a sender's terminal, outputting advertisement information in stead of a call wait sound by the sender's terminal during the waiting for call response at the receiver's terminal, and ceasing the output of the  
15 advertisement information and maintaining conversation state by the sender's terminal at the time of call response from the receiver's terminal.

Preferably, the advertisement information is downloaded from an advertisement servicing enterpriser server to the advertisement storage means of respective terminals. The advertisement information may  
20 comprise a plurality of cells. The cells my be composed based on time unit or content unit.

Preferably, the sender's terminal, in the case the output of advertisement information is interrupted by the call response by the

receiver, stores the cell No. at the moment of interruption, and outputs the advisement information in continuation, starting with the interrupted cell during the next call wait.

- 5           The advertisement information may be output at the moment of receiving a ring-back tone signal, or at the moment of receiving a monitor tone signal or under a special condition, namely, of call wait.

According to another aspect of the invention, the output of the advertisement information may be performed for a finite time before  
10   transmitting receiver's phone No. at the sender's terminal at the time of calling a receiver's terminal and is performed in continuation following the transmission of receiver's phone No. until the time of call response by the receiver's terminal.

When the advertisement sound is interrupted during the call wait, the  
15   remaining part preferably is output after the completion of phone conversation. Otherwise, the remaining part may be displayed in character message. The character message may be provided from the advertisement enterpriser server pursuant to the known SMS transmission protocol.

- 20           At the sender's terminal, the transmission of all cells of advertisement information may be counted as one listening to the advertisement information.

The advertisement sound output at the terminal can originate from



various voices. For example, the sound may comprise the group of the voices of a radio performer, male or female, a hero or heroine of a cartoon and the like to choose from. Preferably, advertisement information is provided in real time by the advertisement servicing enterpriser server. It is also provided that the advertisement servicing enterpriser server, in the case the output of advertisement information may be interrupted by the call response by the receiver, stores the No. of the sender's terminal and the cell No. at the moment of interruption, and outputs the advertisement information in continuation, starting with the interrupted cell during the next call wait. The advertisement information is provided in real time from the advertisement servicing enterpriser server to the sender's terminal at the time of calling a receiver's terminal, and transmitting call for receiver to the receiver switchboard station after a finite time, is provided continuously in real time until the time of call response by the receiver's terminal. Similarly as in the previous aspect, at the advertisement servicing enterpriser server, the transmission of all cells of advertisement information is counted as one listening to the advertisement information.

The above object of the invention is also achieved by an apparatus for servicing advertisement during the call wait, comprising, an advertisement data base for storing advertisement information, a membership data base for storing the information of subscribed members, said members having requested advertisement service during call

response wait, and a control section for providing advertisement information in real time during the wait for call response from receiver's terminal through the connected communication channel, when the receiver's terminal is called by the sender's terminal of a subscribed member, and for ceasing the output of the advertisement information at the time of a call response by the receiver's terminal to thereby preserve the conversation state, the control section being connected to a communication network.

10 The object as described above is also achieved according to still other aspect of the invention by a communication terminal capable of providing advertisement service during a call wait, which comprises a storage section for storing advertisement information downloaded from the advertisement servicing enterpriser server, an input section for inputting

15 telephone Nos. and command keys, a conversation section for processing the transmitted and received conversation voice, a transceiver for transmitting and receiving signals connected to a communication network, and a control section for outputting receivers' telephone Nos. input through said input section to said communication network through said transceiver,

20 for reading out an advertisement information from the storage section during the waiting for call response from receiver's terminal, to output the advertisement information in stead of call wait sound through said conversation section and for ceasing the output of the advertisement

information at the time of a call response by the receiver's terminal to preserve the conversation state.

5 **Brief Description of Drawings**

Figure 1 shows the schematic arrangement of a system for providing advertisement during a phone-call wait according to the invention,

Figure 2 shows the constitution of the advertisement data base of  
10 the advertisement servicing enterpriser server as shown in Figure 1,

Figure 3 shows the constitution of the membership data base of the advertisement servicing enterpriser server as shown in Figure 1,

Figure 4 shows the constitution of the downloaded advertisement list as shown in Figure 3,

15 Figure 5 shows the constitution of a communication terminal according to the invention,

Figure 6 shows the constitution of the advertisement information stored in the storage section as shown in Figure 5,

Figure 7 shows the flow chart for explaining the operation of the  
20 advertisement servicing enterpriser server according to the invention,

Figure 8 shows the flow chart for explaining the operation of the communication terminal according to the invention,

Figure 9 shows the screen of a home page of the advertisement